

REMARKS/ARGUMENTS

Applicant has amended claim 7 to address the issue under 35 U.S.C. § 112 and has specified that the long sides are of the metal casing.

The claims were further rejected under 35 U.S.C. § 103 over the Kuroda reference. This reference teaches a spirally wound battery that includes an anode tab that does not extend the entire width of the anode. It includes a tape that is positioned on the anode tab. In other words, the anode tab is between the tape and the anode.

The present invention is a prismatic cell which includes an anode tab that extends only a portion of the way down the anode and has insulated tape attached to the second side of the anode (i.e., the side on which the anode tab is not attached) which prevents heat damage.

The problem with a prismatic cell of this structure with the insulating tape on one side of the anode, and the anode tab on the second side of the anode, is that the amount of anode active material available for consumption by the cathode active material is significantly reduced. Thus, because the tape prevents the underlying anode portion on one side from reacting, and the anode tab prevents the underlying anode material from the other side from reacting, the anode material adjacent the anode tab is quickly consumed. This, in turn, forces all of the current to flow through a nickel insulating wire, which increases the impedance, decreasing the capacity of the cell.

Extending the anode tab and tape partially down the anode leaves a small strip of anode active material which acts as a current conductor. This, in turn avoids the

problem of the consumption of the anode active material during discharge. This ensures lithium continuity at the end of the life of the battery.

The structure disclosed in the Kuroda patent is not concerned with impedance, and, further, the structure provided in Kuroda would not realize the advantages realized by applicant's invention. The Kuroda reference does not disclose a heat insulating tape on the anode on the opposite side of the anode tab as claimed in the pending application. The tape 6 is on the same side as the anode tab. Therefore, the anode active material on the opposite side of the anode tab will conduct current, and is available for reaction. Thus, the entire anode active material adjacent the tab will not be consumed. There is excess anode active material available.

The battery disclosed in Kuroda has the anode tab positioned at least one fully turn from the end of the anode to cause the anode tab to disconnect from the remaining anode active material. This battery is designed to break the continuity of the lithium on the outside wrap near the end of the batteries' life. This is opposite applicant's intended purpose, i.e., to ensure lithium continuity at the end of life.

The Kuroda reference is actually teaching away from applicant's invention. This makes any modification of the battery disclosed in the Kuroda reference to create applicant's invention unobvious. The structure in Kuroda, in turn, will not see any advantage in terms of impedance based on the location of the anode tab.

Without any of this, there can be no suggestion to modify the structure in Kuroda to form a prismatic cell. One would not utilize the technology of a spiral around

Application Serial No. 10/792,242
Amendment dated April 24, 2007
Reply to Office Action mailed February 8, 2007

cell in a prismatic cell because the problems that are addressed in a prismatic cell, i.e., extreme constraints in terms of size and capacity, are not encountered with a spiral cell.

In light of the above, applicant requests reconsideration of the rejection in 35 U.S.C. 103, and allowance of the same.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.

By 

Gregory J. Lunn, Reg. No. 29,945

2700 Carew Tower
441 Vine Street
Cincinnati, OH 45202
(513) 241-2324 - Telephone
(513) 241-6234 - Facsimile